

## Claims

Having thus described our invention, what we claim as new, and desire to secure by Letters Patent is:

- 1 1. A method, for use in a virus-free certificate cache, of caching one or multiple virus-  
2 free certificates, each virus-free certificate certifying that a file is virus-free, said  
3 method comprising the steps of:  
4
  - 5 • receiving a virus-free certificate request for a file;
  - 6 • identifying the file in a cache table, said cache table comprising for each  
7 identified file one or a plurality of virus-free certificates;
  - 8 • selecting in the cache table one virus-free certificate for the identified file,  
9 using one or a plurality of anti-virus criteria;
  - 10 • retrieving from the cache table said selected virus-free certificate;
  - 11 • sending back in response to the virus-free certificate request the retrieved  
12 virus-free certificate .
- 1 2. The method according to claim 1 wherein the virus-free certificate request  
2 comprises:  
3
  - 4 • a list of one or a plurality of anti-virus programs to execute on the file to  
5 determine whether the file is virus-free or not.
- 1 3. The method according to claim 1 wherein the virus-free certificate request further  
2 comprises:  
3
  - 4 • an identification of the file.



1 8. The method according to claim 1 wherein the step of selecting in the cache table  
2 one virus-free certificate for the identified file using one or a plurality anti-virus  
3 criteria comprises the further steps of:

4

5 • comparing the virus-free certificate authority identification comprised in  
6 each virus-free certificate associated with the identified file in the cache table,  
7 and the virus-free certificate authority identification comprised in the received virus-  
8 free certificate request:

9 and where the virus-free certificate authority identification comprised in a virus-free  
10 certificate associated with the identified file is identical to the virus-free certificate  
11 authority identification comprised in the received virus-free certificate request:

12

13 • selecting said virus-free certificate.

1 9. The method according to claim 1 wherein the step of identifying the file in a cache  
2 table comprises the further steps of:

3

4 If the file is not identified in said cache table:

5

6 • forwarding the received virus-free certificate request to another virus-free  
7 certificate cache;

8 • receiving a virus-free certificate in response to said forwarded virus-free  
9 certificate request;

10 • sending back in response to the received virus-free certificate request, said  
11 received virus-free certificate.

1 10. The method according to claim 1 comprising the further step of:

2

- 3     •     receiving a request to update the cache table, said request comprising a virus-
- 4         free certificate;
- 5     •     storing said virus-free certificate in the cache table.

1     11. The method according to claim 10 wherein the step of receiving a request to  
 2     update the cache table comprises the further step of:

- 3
- 4     •     forwarding said request to another virus-free certificate cache.

1     12. The method according to claim 1 comprising the further step of:

- 2
- 3     •     discarding from the cache table the virus-free certificate which are no more
- 4         valid.

1     13. The method according to claim 1 comprising the further steps of:

- 2
- 3     •     selecting in the cache table one or a plurality of virus-free certificates, using an
- 4         information indicating for each virus-free certificate the date of the latest virus-
- 5         free certificate request which has been received for said virus-free certificate;
- 6     •     discarding from the cache table said one or plurality of selected virus-free
- 7         certificate.

1     14. The method according to claim 1 comprising the further steps of:

- 2
- 3     •     selecting in the cache table one or a plurality of virus-free certificate, using an
- 4         information indicating for each virus-free certificate the number of virus-free
- 5         certificate request which have been received for said virus-free certificate;
- 6     •     discarding from the cache table said one or a plurality of selected virus-free
- 7         certificate Comprises.

1 16. The method according to claim 1 wherein the virus-free-certificate further  
2 comprises:  
3  
4 • a file identification;  
5 • a public key for decrypting the file signature;  
6 • a certificate signature for authenticating the virus-free certificate;  
7 • an indication of the virus-free certificate validity.

1 17. A system for caching one or more virus-free certificates within a LAN/WAN  
2 network, each virus-free certificate certifying that a file to be downloaded to a client is  
3 virus-free, said system comprising:  
4 a mechanism for receiving a request for a virus-free certificate associated with a file to  
5 be downloaded to said client;  
6 cache table device for storing one or more virus-free certificates for files, said cache  
7 table device including look-up mechanism for identifying one or more virus-free  
8 certificates associated with a requested file in a cache table; said look-up mechanism  
9 enabling selection of one virus-free certificate for the identified file using one or a  
10 plurality of anti-virus criteria; and,  
11 mechanism for retrieving from a cache table said selected virus-free certificate; and, in  
12 response to said request, returning a retrieved virus-free certificate with said file.

1 18. A program storage device readable by a machine, tangibly embodying a program  
2 of instructions executable by the machine to perform method steps for caching one or

3 more virus-free certificates within a LAN/WAN network, each virus-free certificate  
4 certifying that a file to be downloaded to a client is virus-free, said method steps  
5 comprising:

- 6 a) receiving a virus-free certificate request for a file;
- 7 b) identifying the file in a cache table, said cache table comprising for each  
8 identified file one or plurality of virus-free certificates;
- 9 c) selecting in the cache table one virus-free certificate for the identified file  
10 using one or a plurality of anti virus criteria; and,
- 11 d) retrieving from the cache table said selected virus-free certificate and  
12 returning a retrieved virus-free certificate with said file.